

ABSTRACT OF THE DISCLOSURE

Methods and apparatus for collecting, storing, processing and using data, such a RMON2 network traffic data, are described. Network traffic probes are identified and attempts are made to configure the identified probes to generate network traffic data sets which are as close to a preselected common data format as possible. Application layer traffic data is collected in addition to network layer traffic data when possible. In an RMON2 embodiment, the common data format includes the use of delta count values as opposed to absolute count values. The common data format of the present invention utilizes terminal count mode format as opposed to all count mode format for the presentation of RMON2 application layer information. To minimize the amount of data processing required to put a probe's network traffic data into the desired common format and to maximize the amount of information collected, network data is obtained from a probe using one of the available RMON2 table formats. The utilized format is selected in the following order of preference: alMatrixTopN(Terminal Mode), alMatrixTopN(AllMode), alMatrix, nlMatrixTopN and nlMatrix. In order to avoid various problems with known data aging processes used to limit the growth of network traffic databases, a database of collected network traffic information which includes multiple parallel sets of data stored at different resolutions is created and maintained. The data sets for each individual resolution are stored in a separate FIFO data structure and with the

oldest data records in the FIFO being overwritten when allocated data space becomes fully utilized.

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